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(54) **METHOD FOR EFFICIENTLY
TRANSFORMING A RASTER IMAGE FROM
ONE MAP PROJECTION TO ANOTHER MAP
PROJECTION**

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(57) **ABSTRACT**

Related U.S. Application Data

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10, 2006.

A method and system for efficiently converting an image
from a first map projection to a second map projection.
The method includes precomputing coordinates in the first
map projection for a subset of the total number of pixels in an
empty second map projection image and subsequently, find-
ing the first map projection coordinates of each of the remain-
ing pixels by linear interpolation using the precomputed first
map projection coordinates of the nearest surrounding pre-
computed pixels. A color is assigned to the second map pro-
jection image pixel with bilinear interpolation using color
values of surrounding first map projection pixels. If the first
map projection has fiducials, only the area within the fiducials
is considered. An embodiment converts a USGS DOQ in
UTM format into Geodetic coordinates.

(51) **Int. Cl.**
G09G 5/00 (2006.01)

(52) **U.S. Cl.** **345/606; 345/581; 345/619**

(58) **Field of Classification Search** None
See application file for complete search history.

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23 Claims, 10 Drawing Sheets

